Abstract of the Disclosure

A method for processing flue gas scrubber material flows. The flue gas is scrubbed with a calcium-based absorbent containing washing fluid for absorbing sulphur oxides from the flue gases, and the formed gypsum slurry is directed from the flue gas scrubber to the separator. At the separating point of the separator, gypsum is separated from the washing fluid and the gypsum and washing fluid are taken out of the separator as separate material flows. From the flue gas scrubber the washing fluid is directed to a tank located before the separating point of the separator or after the separating point of the separator, in which tank foam is separated from the washing fluid as its own phase and taken out of the tank.